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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/473,270	12/27/1999	VICTOR SKLADNEV	3415/29	9784

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EXAMINER

LU, TOM Y

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 05/06/2004

75

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/473,270

Applicant(s)

SKLADNEV ET AL.

Examiner

Tom Y Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 61-65 is/are pending in the application.
- 4a) Of the above claim(s) 30-60, 66 and 67 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 61-63 is/are allowed.
- 6) ☐ Claim(s) 1-21, 64 and 65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. The amendment and written response filed on February 2, 2004 has been entered.
2. Claims 23-29 were cancelled.
3. Claims 30-60 and 66-67 were withdrawn from consideration.
4. Claims 1-22 and 61-65 are pending.

***Response to Arguments***

5. Applicant's arguments, see Remarks, pages 19-27, filed on February 02, 2004, with respect to the rejection(s) of claim(s) 1-22 and 61-65 and under 35 U.S.C. 102(e) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Perkins et al (U.S. Patent No. 6,106,457).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-20 are rejected under 35 U.S.C. 112 2<sup>nd</sup> Paragraph.
  - a. Claim 1 recites the limitation "all cones positioning their respective windows at the same distance from said imaging device" in line 10. There is insufficient antecedent basis for this limitation in the claim. The examiner does not understand how it is possible to have all cones positioning their respective windows at the same distance from said imaging device when figure 6D clearly shows the horizontal length of the cone is different from figures 6A-6C.

- b. Claims 2-20 are rejected as being dependent upon Claim 1.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 7, 19 and 21 rejected under 35 U.S.C. 102(b) as being anticipated by Perkins et al (U.S. Patent No. 6,106,457).

- a. Referring to Claim 1, Perkins discloses a hand-held case (see figure 14, numeral 730), a source of light inside the case for directing light toward the front of the case (figure 5a, numeral 308), an imaging device in the case for generating imaging signals from light derived from said area of skin (figure 13, numeral 1132, column 19, line 11), and at least two cones attachable to the front of said case (see figure 14, 4 different instrument interchangeable heads, the examiner interprets instrument heads as cones) each having a transparent window (see figure 5a, numeral 300) for bearing against an area of skin, each of said cones serving a different function and having properties different from the other cones (each of heads serves a different function), but all cones positioning their respective windows at the same distance from said imaging device (see figure 14, numerals 740 and 996 have the same distance from said imaging device).
- b. Referring to Claim 7, Perkins discloses wherein at least one of said cones is adapted to permit the imaging of a lesion (figures 6a-6c), and another of said

cones is adapted to permit the imaging of a relatively substantial portion of the patient (figures 7a-7c).

- c. Referring to Claim 19, Perkins discloses wherein at least of said cones is adapted to permit the imaging of a lesion and another of said cones is adapted to permit the imaging of a reference material, and said cones have windows of the same thickness (the head shown in figure 5a has a window of the same thickness).
- d. Referring to Claim 21, the only difference between Claim 1 and Claim 21 is Claim 21 calls for additional limitation of "a transparent window of the same thickness for bearing against an area of skin", which Perkins teaches in figure 5a.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 8. Claims 4, 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins et al (U.S. Patent No. 6,106,457) in view of Fraden et al (U.S. Patent No. 5,163,418).

- a. Referring to Claim 4, Perkins teaches a cone having a transparent planar section at the front (figure 5a, numeral 300). However, Perkins does not teach the planar section can be non-transparent at the front thereof whose colour is a known reproducible colour. Fraden teaches using a substantially transparent film (note substantially transparent is equivalent of non-transparent because Fraden at

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column 4, line 44, teaches it only requires the transparency to be infrared transparent, which any light color film would be infrared transparent) to cover the window of a probe as shown in figure 2, which the front window of the probe is deemed to be non-transparent herein. At the time the invention was made, a person of ordinary skill in the art would have been motivated to do this because Fraden at column 4, lines 57-62 points out such layer serves as a sanitary barrier that protects a patient from direct contact with probe.

- b. Referring to Claim 5, Perkins discloses having a window. However, Perkins does not disclose a removable layer of known reproducible colour attached thereto. Fraden at column 4, lines 30-40, teaches using a sheath, which is made from a piece of film, serves as a layer covers the window. Such layer is removable and contains reproducible colour. Note any colour of the film is a reproducible colour. The motivation for combining two references is provided in Claim 4.
- c. Referring to Claim 6, Fraden teaches wherein said removable layer is on said window such that upon removal it cannot be re-used (for the purpose of hygiene, the film layer should not be re-used).

9. Claims 8, 9, 10, 11/9, 11/10, 12/9, 12/10, 13, 14, 15, 16, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins in view of Muraki et al (U.S. Patent No. 5,463,497). All the arguments and applicability in Claim 1 are incorporated herein.

- a. Referring to Claim 13, Perkins discloses using a single light source 298 in combination with polarizer 308 and 312 to reduce lens glare during the light reflection and provide sufficient light intensity. However, Perkins does not

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disclose having a plurality of light sources facing the front of the case and arranged in a plane with pairs of intensity distributions from said individual light sources being spatially separately such that they overlap at their half-intensity levels so that the resulting summation of their intensities has a flat central region. Muraki at column 4, lines 20-26, discloses when these light beams LB1 and LB2 are inputted to the light receiving surface of the optical integrator 22 and partially overlap one upon another, the combined light has sectional intensity distribution which, as shown in figure 2C, is symmetrical with respect to the optical axis and, additionally, it is substantially uniform. A flat central region is substantially uniform. And the light sources are overlap at their half-intensity levels as shown in figure 2C. At the time the invention was made it would have been obvious to a person of ordinary skill in the art to implement Muraki's technique in Perkins' system. One of ordinary skill in the art would have been motivated to do this because Perkins at column 15, lines 54-64, teaches using polarizers to obtain better imaging quality during the skin examination and Muraki's technique would enhance the imaging quality by using a plurality of light sources and providing uniform intensities.

- b. With regard to Claim 8, the limitations are addressed in Claim 13.
- c. With regard to Claim 9, the limitations are addressed in Claim 13.
- d. With regard to Claim 10, the limitations are addressed in Claim 13.
- e. With regard to Claims 11/9 and 11/10, the limitations are addressed in Claim 13.

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- f. With regard to Claims 12/9 and 12/10, Muraki at column 15-17, discloses the laser light from the laser 11 has a sectional intensity distribution which is in the form of a Gaussian distribution. And later Muraki at column 4, lines 20-25, discloses two light beams LB1 and LB2 are combined to have a sectional intensity distribution as shown in figure 3C, which two Gaussian pulses partially overlap each other, and satisfies the Raleigh criterion as the claim calls for.
  - g. With regard to Claim 14, Muraki at column 9, line 18, teaches having four light beams to achieve the uniform of light intensities.
  - h. With regard to Claim 15, see explanation in Claim 12/9.
  - i. With regard to Claim 16, see explanation in Claim 14.
  - j. With regard to Claim 17, Muraki at column 9, line 6, teaches using a beam splitter to separate the light beams, which are the claimed "light sources".
  - k. With regard to Claim 18, see explanation in Claim 17.
10. Claims 20, 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkins (U.S. Patent No. 6,106,457) in view of Perkins (U.S. Patent No. 6,010,450). All the arguments and applicability in Claims 1 and 19 are incorporated herein.
- a. Referring to Claim 20, Perkins'457 patent discloses use of planar window at the front of a probe head as shown in figure 5a. However, Perkins'457 does not disclose the thickness of the window has to be at least 5mm. It appears having 5mm for the thickness of window planar is just a matter of design choice. Nonetheless, applicant in the remarks dated 02/02/2004 argues the use of at least 5mm is to construct total internal reflection. Therefore, the examiner herein



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incorporate a latter published patent Perkins'450 to show the total internal reflection is taken into consideration for the planar window 58 (Perkins'450: column 5, lines 28-29), and the total internal reflection is not dependent upon the thickness of the window, but rather the incident angle of the light beam. Therefore, the use of 5mm herein is an obvious matter of design.

- b. With regard to Claim 64, see explanation in Claim 1 and 20.
- c. With regard to Claim 65, Perkins'450 discloses wherein said transparent window has side edges that are absorptive and non-radiating (Perkins'450: see figure 3, lens holder 60, which is absorptive and non-radiating).

***Allowable Subject Matter***

11. Claims 2-3 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

- a. Claim 2 defines a feature of at least one cone has multiple colours around its transparent window permanently in the field of view of said imaging device to aid in the calibration of said imaging device. This feature in Claim 2 is not taught or suggested by the art of record.
- b. Claim 3 is dependent upon Claim 2.

12. Claims 61-63 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

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- a. Independent Claims 61 and 63 both define a feature of a cone having a transparent window at the front thereof with a plurality of reference targets of known colours on an outer surface that bears against the skin of a patient. This feature in combination with other features in Claim 61 and 63, which are the broadest allowable claims, are not taught or suggested by the art of record.
- b. Claim 62 is dependent upon Claim 61.

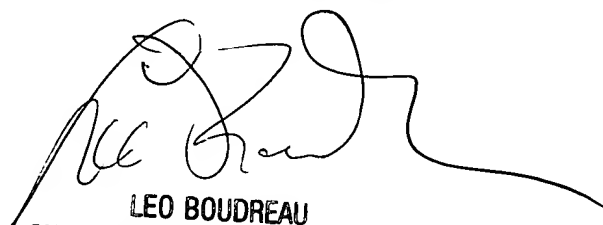
***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y Lu whose telephone number is (703) 306-4057. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Y. Lu

  
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